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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,264	11/23/2001	Hiroshi Sugiura	216379US2	2415
22850	7590	02/25/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MARTIN, ANGELA J	
			ART UNIT	PAPER NUMBER

1745

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,264

Applicant(s)

SUGIURA ET AL.

Examiner

Angela J. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 14-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/15/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on November 15, 2004 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Motozono et al., European Pat. No. EP0993060 A2.

Rejection of claims 1-7 drawn to a fuel cell output characteristic estimating apparatus; claims 8-13 drawn to a fuel cell system.

Motozono et al., teach a fuel cell output characteristic estimating apparatus comprising a current-voltage detector and a controller that estimates the output characteristic of the fuel cell on the basis of the current and voltage between the terminals, detected by the current-voltage detector, and a predetermined basic output characteristic of the fuel cell (p. 4, sect. 0025-p. 5, sect. 0029). It teaches the controller

derives basic output characteristic from a fuel supply pressure applied to the fuel cell and a temperature of the fuel cell (p. 6, sect. 0037-0040). It also teaches the controller derives the basic output characteristic from an output characteristic corresponding to the fuel supply pressure applied to the fuel cell and the temperature of the fuel cell (p. 6, sect. 0037-0040). It teaches the controller estimates an internal resistance of the fuel cell on the basis of the current, the voltage between terminals, and the basic output characteristic, and estimates the output characteristic of the fuel cell on the basis of the estimated internal resistance of the fuel cell (p. 3, sect. 0009, p. 4, sect. 0024). In addition, it teaches the controller estimates the internal resistance of the fuel cell on the basis of the current, the voltage, and the basic output characteristic, and estimates the output characteristic of the fuel cell (p. 5, sect. 0026; Fig. 1). It teaches the controller estimates the output characteristic on the basis of it corresponding to the fuel supply pressure applied to the fuel cell and the temperature of the fuel cell (p. 5, sect. 0026; Fig. 1). Additionally, it teaches a fuel cell system having a fuel cell, the fuel cell system comprising a fuel cell output characteristic estimating apparatus comprising a current-voltage detector and a controller that estimates the output characteristic of the fuel cell on the basis of the current and voltage between the terminals, detected by the current-voltage detector, and a predetermined basic output characteristic of the fuel cell; sets a target output of the fuel cell using the output characteristic; and adjusts an output of the fuel cell such that the set target output is generated by the fuel cell (p. 4, sect. 0025-p. 5, sect. 0029). It also teaches the controller changes supply of the electric power to or from the power supply when the set target output is in excess of or short of the required

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output of the fuel cell system (abstract). It teaches the controller includes a transformer connected to terminals and transforms the voltage between the terminals to be applied to output terminals of the fuel cell (p. 4, sect. 0025- p. 5, sect. 0026). It also teaches the controller changes the voltage between the terminals into a voltage corresponding to the set target output (p. 5, sect. 0026; Fig. 1; Fig. 6).

Thus, the claims are anticipated.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

